

**TOPIC: PROPOSAL TO OFFER BACHELOR OF SCIENCE IN
MECHANICAL ENGINEERING TECHNOLOGY AT MESA
STATE COLLEGE**

PREPARED BY: HEATHER DELANGE

I. SUMMARY

This agenda item requests approval for Mesa State College to offer a Bachelor of Science in Mechanical Engineering Technology.

II. BACKGROUND

The following is summarized from Mesa State's proposal:

The Mechanical Engineering Technology (MET) program's objective is to provide students with the knowledge necessary to apply state-of-the-art techniques to design and build products and systems to meet the current and future needs of society. Laboratory courses are an integral component of the Mechanical Engineering Technology program and are designed to develop student competence to apply experimental design methods, as well as provide a "hands-on" approach to designing and building products and systems to meet societal needs.

Mesa State College, in cooperation with the University of Colorado Boulder (CU-Boulder), offers a B.S. in Mechanical Engineering with a typical rigorous technical curriculum with high admissions standards (CU-Boulder College of Engineering admissions standards apply to the partnership program). The proposed MET program creates an opportunity for students looking for an education that is more hands-on and technology oriented than the CU-Boulder degree and also more academically rigorous than the associate degree level.

ROLE AND MISSION SUPPORT

The Bachelor of Science Degree in Mechanical Engineering Technology supports the role and mission of Mesa State College. The statutory mission states:

There is hereby established a college at Grand Junction, to be known as Mesa state college, which shall be a general baccalaureate and graduate institution with moderately selective admission standards. Mesa state college shall offer liberal arts and sciences, professional, and technical degree programs, and a limited number of graduate programs. Mesa state college shall also maintain a community college role and mission, including career and technical education programs. Mesa state college shall receive resident credit for two-year course offerings in its commission-approved service area. Mesa state college shall also serve as a regional education provider. C.R.S. 23-53-101

EVIDENCE OF NEED/DEMAND FOR THE PROGRAM:

Metropolitan State College of Denver currently has Civil, Mechanical, and Electrical Engineering Technology programs and graduates about 20 to 30 students per year. Mechanical Engineering Technology in particular has shown the most growth and graduates 10 to 20 students per year. The MET program will fill a need for students looking for a bachelor's degree in an engineering-related field on the western slope but are not interested in the CU-Boulder Mechanical Engineering (ME) degree. Students graduating with an MET degree in Colorado can sit for the Fundamentals of Engineering exam, but must wait one additional year compared to engineering students before taking the Professional Engineer exam (that is, five rather than four years).

Mesa State College expects that 100 students per year will enter the engineering program (engineering includes both the CU/MSC ME program as well as the MSC MET program). Of those, faculty anticipates that 15 students will choose MET annually. The MET program provides an alternative degree pathway for students who do not qualify for admission to CU-Boulder by the end of their second year in the ME program.

RESOURCE NEEDS/CURRICULUM AND INSTRUCTION

The proposed curriculum aligns with the requirements of ABET for Accrediting Engineering Technology Programs.

Space at the Archuleta Center is adequate to accommodate the MET program. Faculty will have office space at the same facility.

There is need for new faculty to support the courses and the Board of Trustees has authorized the hiring of a new faculty member for next year. Library resources acquired through the CU/MSC ME partnership

III. STAFF ANALYSIS

Department staff have reviewed this proposed program and letters of assurances from academic administrators to ensure that the degree program meets the State's performance measures outlined in C.R.S. §23-5-129.6. The program meets all performance measures set forth by the state.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approve the Bachelor of Science degree in Mechanical Engineering Technology submitted by Mesa State College.

VI. SUPPLEMENTAL INFORMATION

Copies of all relevant statute and policy are on file in the Academic Affairs Office.

STATUTORY AUTHORITY

C.R.S. §23-5-129 (6)(b)